

I. Listing of Claims

1. (Previously Presented) A safety arrangement incorporating a seat-belt to protect an occupant of a vehicle seat, of the type wherein the seat-belt is part of a restraining system to restrain the occupant in a collision situation, the safety arrangement comprising a unit to create an output signal representative of the weight of the seat occupant, the unit producing the output signal in response to a first input signal (F) which is a function of a force applied to the seat-belt by the occupant in a collision, and a second input signal (a_c) which is a function of the acceleration of the seat in the collision, the restraining system being controllable in response to the output signal to adjust the restraining force applied to the occupant.

2. Previously Cancelled.

3. Previously Cancelled.

4. (Previously Presented) A safety arrangement according to Claim 1 wherein the seat-belt is associated with an adjustable belt force limiter which is adjustable to affect the restraining force applied to the seat occupant.

5. (Previously Presented) A safety arrangement according to Claim 1 wherein the restraining system includes a controllable air-bag controlled in response to the output signal to adjust the restraining force applied to the occupant.

6. (Previously Presented) A safety arrangement according to Claim 5 wherein the controllable air-bag has a controllable gas generator to adjust the inflation characteristic of the air-bag.

7. (Previously Presented) A safety arrangement according to Claim 5 wherein the air-bag has controllable adjustable ventilation to adjust the restraining force applied to the occupant.

8. (Previously Presented) A safety arrangement according to Claim 1 wherein the restraining system includes a controllable device controlled in response to the output signal for controllably resisting forward movement of the seat.

9. (Previously Presented) A safety arrangement according to Claim 1 wherein the restraining system includes a controllable knee-pad controlled in response to the output signal for controllably resisting forward movement of the knees of the occupant.

10. (Previously Presented) A safety arrangement according to Claim 1 incorporating a control unit responsive to the output signal, the control unit being configured to adjust the restraining force applied to the occupant so that the restraining force increases with an increase of the force applied to the seat-belt by the occupant in a collision.

11. (Previously Presented) A safety arrangement according to Claim 10 wherein the control unit is configured to adjust the restraining force by controlling the level of the restraining force to have one of a plurality of predetermined values.

12. (Previously Presented) A safety arrangement according to Claim 11 wherein the control unit selects a time at which the level of the restraining force is changed from one predetermined value to another of the predetermined values.

13. (Previously Presented) A safety arrangement according to Claim 1 wherein the arrangement incorporates a control unit to adjust the restraining force in dependence upon a crash severity signal representing the severity of the collision.

14. (Previously Presented) A safety arrangement according to Claim 13 wherein the safety arrangement incorporates an accelerometer mounted in the front of the vehicle to provide the crash severity signal.

15. (Previously Presented) A safety arrangement according to Claim 13 wherein the safety arrangement incorporates a sensor to sense, in advance of a collision, a potential accident and to provide the crash severity signal.

16. (Previously Presented) A safety arrangement according to Claim 15 wherein the sensor comprises a Doppler radar sensor.

17. (Previously Presented) A safety arrangement according to Claim 1 wherein the output signal is mainly proportional to the first input signal and inversely proportional to the second input signal.

18. (Previously Presented) A safety arrangement according to Claim 1 wherein the second input signal is processed by being passed through a low pass filter.

19. (Previously Presented) A safety arrangement according to Claim 1 wherein the second input signal is processed by being integrated over a period of time, the value of such integration being divided by a value proportional to the length of the period of time.

20. (Previously Presented) A safety arrangement according to Claim 1 wherein the unit which additionally responds to a third input signal which is a function related to the speed of the seat-belt withdrawn from a retractor to which the seat-belt is connected.

21. (Currently Amended) A safety arrangement according to Claim 20 wherein the signal related to the seat-belt is indicative of belt acceleration-~~(L²)~~ (I^m).

22. (Previously Presented) A safety arrangement according to Claim 1 wherein the unit is configured to generate the output signal in dependence upon whether the first input signal indicates that the force applied to the seat-belt has exceeded a predetermined force threshold value, and in dependence upon whether the second input signal indicates that the acceleration has a predetermined value relative to at least one predetermined acceleration threshold value.

23. (Previously Presented) A safety arrangement according to Claim 1 wherein the output signal is generated in dependence upon whether the second input signal indicates that the acceleration is above a first relatively high acceleration threshold value, between the first relatively high acceleration threshold value and a second relatively low acceleration threshold value, or beneath the relatively low acceleration threshold value.

24. (Previously Presented) A safety arrangement according to Claim 1 wherein the unit is configured to generate the output signal in dependence upon whether the second input signal has reached a first acceleration predetermined value, and in dependence upon whether the first input signal indicates that the force applied to the seat-belt is above or below a predetermined force value.

25. (Previously Presented) A safety arrangement according to Claim 1 wherein the output signal is generated in dependence upon whether the first input signal exceeds a first relatively high force threshold, is between a first relatively high threshold and a second relatively low threshold, or is beneath the relatively low threshold.

26. (Previously Presented) A safety arrangement according to Claim 1 incorporating a sensor to sense a force applied to a seat-belt and to generate the first input signal.

27. (Previously Presented) A safety arrangement according to Claim 26 wherein the sensor to sense a force applied to the seat-belt senses motion of a retractor spool on which part of the seat-belt is wound on.